



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/689,352

10/20/2003

Norbert Fruehauf

2702

4202

7590

06/28/2006

STRIKER, STRIKER & STENBY
103 East Neck Road
Huntington, NY 11743

EXAMINER

NELSON, ALECIA DIANE

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,352

Applicant(s)

FRUEHAUF, NORBERT

Examiner

Alecia D. Nelson

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2 documents</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 10/20/03 and 6/23/05 have been considered by the examiner.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1-4** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. More specifically in claim 1, lines 7-15, is generally narrative and not clear. In line 8, of claim 1 the limitation states that the third thin film transistor is taping the diode driving current and an output of the first transistor, however according to the specification and drawings, the third thin film transistor is taping the diode driving current, which is an

output of the first transistor. The examiner was able to receive a better understanding of the invention through the specification, and will reject the claims as best understood.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-3** are rejected under 35 U.S.C. 103(a) as being unpatentable over Inukai (U.S. Patent Application No. 2002/0202395) in view of Bu (U.S. Patent Application No. 2002/0101172).

With reference to **claim 1**, Inukai teaches a driving circuit for an image point of an image screen which has an organic light emitting diode (307) comprising; a capacitor (308); a feedback coupling (see Figure 8); a first thin film transistor (306) as a current driving transistor for the diode; a second transistor (305) which is connected by a current-conducting electrode with a gate of the first transistor (306) and by a second current conducting electrode with a data conductor (301) and by its gate electrode with a scanning signal conductor (302); a third thin film transistor (309); and a current measuring and voltage regulating circuit (312) providing a voltage signal which is dependent on a current measuring result and voltage comparison, so that the diode during driving of the gate of the third transistor due to its non-linear switching

characteristic acts as a switch for a current deviation in the current measuring and voltage regulating circuit (see paragraphs 80-94).

While Inukai teaches the usage of a third thin film transistor, which taps the input of the first transistor, there fails to be any disclosure of taping a driving current being output from the first transistor. Also, while Inukai teaches the usage of a current measuring and voltage regulating circuit, there fails to be any disclosure of the circuit providing an output voltage signal to the data conductor dependent on a current measuring result and voltage comparison.

Bu teaches a third thin film transistor (53), which taps the input of the first transistor (21) and supplies it to the current measuring and voltage regulating circuit (6) (see paragraph 117); the measuring and voltage regulating circuit (6) provides an output voltage signal to the data conductor (4) dependent on a current measuring result and voltage comparison (see paragraph 118 and 120).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow the current measuring result to be feedback to the data conductor as taught by Bu to be used in a device similar to that which is taught by Inukai in order to thereby maintain the value of the reference current due to the feedback voltage in turn controlling the value of the driving current to produce an OLED display device that can achieve uniform light emission.

With reference to **claim 2**, Inukai teaches that the second and third transistors (305, 309) have gate electrodes, which are both, connected with the scanning signal conductor (302, 303).

With reference to **claim 3**, Inukai teaches that all of the above mentioned elements of the driving circuit are located at a same side of the light emitting diode, so that no contact must be guided through a semiconductor material of the diode (see paragraph 88).

7. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Inukai in view of Bu as applied to **claims 1-3** above, and further in view of Cato (U.S. Patent No. 6,466,188).

With reference to **claim 4**, Inukai and Bu teach and further teach that the current measuring and voltage regulating circuit has components which are connected to split conductors (see Inukai Figure 8; Bu Figure 2), however fail to teach that the components are low ohmic.

Cato teaches a boosting circuit (401) that provides a regulated step-up voltage to a non-linear device such as an array of light emitting diodes (see abstract), wherein the circuit (401) comprises components (435) which are low ohmic (see column 4, lines 11-15).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow the for the usage of low ohmic components, similar to that

which is taught by Cato, in a device similar to that which is taught by the combination of Inukai and Bu in order to provide a constant current through an OLED display in order to achieve a desirable light emission uniformity.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alecia D. Nelson whose telephone number is 571-272-7771. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/689,352
Art Unit: 2629

Page 7

adn/ADN
June 10, 2006


KENT CHANG
PRIMARY EXAMINER